

## NOTES ON YUCCA

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*With plates 138 and 139***Yucca Thornberi**, spec. nov.

Plate 138

Trunci 0.75–1.75 m. alti, congesti, infra foliis siccis reflexo-patentibus arcte obtecti, supra comam magnam satis elongatam foliorum viridium gerentes. Folia lineari-lanceolata, 0.30–1 m. vel ad 1.20 m. longa, 1.5–3.5 cm. lata, a basi vel a medio paullo latiore apicem versus attenuata, acuminata, pungentia, concava, utrinque laevia, luteo-viridia, stricta vel leviter recurva, flexibilia, initio margine saepe evanescenter denticulata, mox filifera filis crassiusculis curvatis tarde deciduis, parte basali 2.5–7.5 cm. longa et 7–12.5 cm. lata. Inflorescentia scapo 22–45 cm. longo incluso 1–1.30 cm. alta, angusta, basi et apice attenuata, folia quarta parte vel dimidio superantes; ramuli circiter 25, initio erecto-ascendentes, demum patententes; bractee magnae, late triangulares; flores campanulati, 7.5–12.5 cm. longa; pistillum 5.5–7.5 cm. longum, ovario plerumque oblongo rarius attenuato,  $4\frac{1}{2}$  ad  $6\frac{1}{2}$  longiore quam lato, stylo 5–6 mm. longo, stigmatibus sub anthesi erectis vel fere erectis; filamenta 4–6.5 cm. longa, apice clavato brevi pro parte inferiore longo gracili. Fructus 13–17.5 cm. longus, 3–4.5 cm. diam., baccatus, incrassatus, apicem versus attenuatus et 2.5–5 cm. sub apice subito constrictus parte constricta plus minusve recurvata.

ARIZONA. P i m a C o . : foothills of the Rincon Mts., slightly north of Rincon Creek, a tributary of Pantano Wash, elevation 3600 ft., *S. D. McKelvey*, no. 1627, March 23, 1930 (type; herb. Arnold Arboretum). Also from the same region are the author's collections nos. 1585, 2123, 2556, 2557, 2558, 2559, 2561, 2562, 2682, 2684.

*Yucca Thornberi* forms large and crowded clumps and produces many rather long stems 2–5 ft. in height which are covered below with a thick thatch of reflexed-spreading dead leaves and are crowned by large, somewhat elongated heads of green foliage which are constricted near the base and spreading above; the slightly broadened, concave, not conspicuously angled leaves are commonly smooth on both surfaces, yellow-green in color, with acuminate apex and, when young, often evanescently denticulate margins which, when the foliage is more mature become abundantly filiferous; the fibres are late-deciduous, moderately coarse

and loosely curled. The inflorescence is for some time rather fleshy and brittle, 3–4 ft. in length overall, with a scape 9–18 in. in length; the inflorescence proper is long, narrow, tapered at both ends, and extends for  $\frac{1}{4}$ – $\frac{1}{2}$  its length above the leaves; its branchlets are about 25 in number, at first erect-ascending, eventually spreading; its bracts are large, fleshy to leathery, broad-triangular in form. The flowers are campanulate, large, 3–5 in. in length; the pistil is  $2\frac{1}{8}$ –3 in. long with a commonly oblong, only rarely tapered, ovary which is  $4\frac{1}{2}$ – $6\frac{1}{2}$  times as long as broad, the short style is  $\frac{3}{16}$ – $\frac{1}{4}$  in. long and, at anthesis, with erect, or nearly erect stigmas; the filaments vary from approximately  $1\frac{1}{2}$ – $2\frac{1}{2}$  in. in length and reach anywhere from slightly below to slightly above the shoulders of the ovary; their clavate tip is short in proportion to the long, slender, lower portion. The baccate fruit is 5–7 in. in length, slightly enlarged and tapered upward for its major lower portion, for 1–2 in. below the tip much contracted and commonly somewhat recurved.

*Yucca Thornberi* appears to be most closely related to *Y. arizonica* and to *Y. baccata* Torr., differing conspicuously from the latter in habit of growth, from both species it is distinct in form of inflorescence, in character of foliage and, though less so, in fruit.

It is a pleasure to give to this new species the name *Yucca Thornberi* in recognition of the fact that Dr. J. J. Thornber of the University of Arizona called the author's attention to the plant and with her spent considerable time in its study.

**Yucca brevifolia** Engelm. var. **Jaegeriana**, var. nov. Plate 139

A typo recedit habitu humiliore vix 3–4 m. excedente, trunco brevi circiter 75–90 cm. longo, ramis brevibus fere erectis arcte congestis, foliis circiter 10 cm. longis vel 20 cm. vix excedentibus comam congestam et symmetricam formantibus, inflorescentiis vix 30 cm. longis, scapo 2.5–5 cm. longo et 2.5–3 cm. crasso incluso, ramulis tantum 2.5–6.5 cm. longis.

CALIFORNIA. S a n B e r n a r d i n o C o . : vicinity of the Shadow Mts., elevation approximately 4000 ft., *S. D. McKelvey*, no. 2732, April 30, 1932 (type; herb. Arnold Arboretum).

In several of the broad basins and foothill areas of the eastern part of the Mohave Desert of California and also in southern Nevada, occurs a form of the Joshua-tree which deserves varietal recognition. The plant—in appearance a miniature Joshua-tree—was brought to the attention of the writer by Mr. Edmund C. Jaeger of Riverside Junior College, Riverside, California, and is named in appreciation of this fact.

This variety is primarily distinguished from the better known plant by its dwarfer habit,—the plants not exceeding, except rarely and only in extremely old specimens, 10–12 ft. in height; the trunk is short, about  $2\frac{1}{2}$ –3 ft. in length, stout (although, proportionately to that of the type of the species, slender); the branches are short, nearly erect and form an extremely dense, compact crown; the clusters of green leaves are crowded and symmetrical, about 1–2 ft. in length; the leaves are short, including the base about 4 in. long, not exceeding 8 in.,—or about the length of the shorter leaves of the type of the species; the inflorescence scarcely reaches 1 ft. in length; the scape is 1–2 in. long,  $1\frac{1}{4}$  in. in diameter at base, and the flowering portion 9–10 in. in length with stout branchlets only  $1\text{--}2\frac{1}{2}$  in. long. In flower and in fruit characters it is very similar to the plant of taller habit.

Mr. Jaeger states (in litt., Oct. 2, 1934) that the distribution of the variety “reaches its greatest density in the vicinity of the New York Mts. in California.” It has been collected by the writer in southern Nevada between the Colorado River and Searchlight (no. 4094), in the Spring Mts. (no. 4142) and on the eastern slopes of the Charleston Mts. (nos. 4097, 4098, 4099, 4100, 4132), in the first and last of which regions it occurs in abundance.

***Yucca arizonica*, nom. nov.**

*Yucca puberula* sensu Torrey in Botany, Emory Report, 221 (1859), in part, not Haworth.

*Yucca brevifolia* Schott ex Torrey, Botany, Emory Report, 221 (1859), in part, as synonym of *Y. puberula* Torrey, not Haworth. — Engelmann in Trans. Acad. St. Louis, 3:46 (1873), in part, as synonym of *Y. Schottii* Engelm. — Trelease in Rep. Mo. Bot. Gard. 13:100, tt. 57–59, 96 (fig. 2, range map) (1902), first appearance as a valid species. — Not *Y. brevifolia* Engelm. (1871).

*Yucca Treleasei* MacBride in Contrib. Gray Herb. ser. 3, no. 56:15 (1918); not *Y. Treleasei* Sprenger (1906).

The name *Y. puberula* Haw. was first erroneously applied by Torrey to specimens collected by Arthur Schott in regions adjacent to Nogales, Arizona. Because of its connotation it is in the main referable to *Y. Schottii* Engelm., the inflorescences of which species are commonly puberulous. Schott’s material represented a complex. For a certain portion of this material the name *Y. brevifolia* used by Schott in his notes was adopted by Trelease in 1902. This name, as pointed out by MacBride in 1918 was antedated by the name *Y. brevifolia* used by Engelmann in 1871 for the Joshua-tree; MacBride in consequence gave to Schott’s plant the new name *Y. Treleasei*.



*YUCCA THORNBERI* McKelvey  
A plant growing at the type locality.